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The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* THOMAS A. FOLLO, JOCHEN THOENE,  
STEPHAN FISHER and WILLIAM VREELAND

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Appeal 2009-002296  
Application 10/816,657  
Technology Center 3700

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Decided:<sup>1</sup> July 17, 2009

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Before JENNIFER D. BAHR, STEVEN D.A. McCARTHY  
and STEFAN STAICOVICI, *Administrative Patent Judges*.

McCARTHY, *Administrative Patent Judge*.

DECISION ON APPEAL

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<sup>1</sup> The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304 (2008), begins to run from the Decided Date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or the Notification Date (electronic delivery).

STATEMENT OF THE CASE

The Appellants appeal under 35 U.S.C. § 134 (2002) from the Examiner's decision finally rejecting claims 1, 4, 8, 10 and 28 under 35 U.S.C. § 103(a) (2002) as being unpatentable over Coffin '982 (EP 1 252 982 A1, publ. Oct. 30, 2002); finally rejecting claims 23 and 24 under § 103(a) as being unpatentable over Coffin '982 and Gilder (US 6,212,777 B1, issued Apr. 10, 2001); finally rejecting claims 29 and 30 under § 103(a) as being unpatentable over Coffin '982 and Trotta (US 4,407,067, issued Oct. 4, 1983); and finally rejecting claim 31 under § 103(a) as being unpatentable over Coffin '982 and Coffin '665 (US 5,365,665, issued Nov. 22, 1994). We have jurisdiction under 35 U.S.C. § 6(b) (2002).

We AFFIRM.

Claim 1 is the sole independent claim on appeal:

1. A razor cartridge comprising:  
a guard portion;  
a cap portion;  
at least four razor blades positioned between said guard portion and said cap portion, including a first razor blade being positioned adjacent to said guard portion, a last razor blade being positioned adjacent to said cap portion, and at least two interior razor blades being positioned between said first razor blade and said last razor blade, each having a cutting edge and an overall exposure relative to at least two skin engaging surfaces defined by said razor cartridge;  
said overall exposure of each of said four razor blades being equal to an average of four individual exposures measured along a length defined by said razor blade for which exposure is sought;

1                   said individual exposures being equal to the  
2                   length of an exposure line extending between the  
3                   cutting edge of the razor blade for which exposure  
4                   is being sought and a tangent line, said exposure  
5                   line being approximately perpendicular to said  
6                   tangent line and wherein  
7                   said tangent line is defined by two points,  
8                   one of said points being positioned on a skin  
9                   engaging surface immediately preceding said razor  
10                  blade for which exposure is being sought, and the  
11                  other of said two points being located on a skin  
12                  engaging surface immediately aft of said razor  
13                  blade for which exposure is being sought, wherein  
14                  said overall exposure of said first razor  
15                  blade is negative; and wherein  
16                  said razor cartridge defines a non-  
17                  progressive blade geometry such that said overall  
18                  exposures of said interior razor blades are  
19                  substantially the same.  
20

21                The Specification specially defines a “skin engaging surface” to  
22                encompass the cutting edges of the razor blades along with contact surfaces  
23                of the guard portion and the cap portion of the razor cartridge. (Spec. 7,  
24                ¶ 0033). Claim 1 specially defines the terms “individual exposure” as being  
25                equal to the normal distance between the line of the cutting edge of a razor  
26                blade and a tangent line defined by two points, one of the points being  
27                positioned on a skin engaging surface immediately preceding the razor blade  
28                for which the exposure is being sought and the other of the two points being  
29                located on a skin engaging surface immediately aft of the razor blade for  
30                which the exposure is being sought. Claim 1 also specially defines the term  
31                “overall exposure” of a razor blade as being equal to an average of four  
32                individual exposures measured along a length defined by the razor blade.

1 “Neutral” exposure implies that the cutting edge of the razor blade lies on  
2 the tangent lines being employed to determine exposure while “negative”  
3 individual exposure implies that the cutting edge of the blade lies below the  
4 tangent lines. (Spec. 7, ¶ 0033).

5 The razor blades are positioned in a “non-progressive orientation”  
6 relative to one another if the overall exposure of each blade from the guard  
7 to the cap does not become progressively more and more positive. (Spec. 8,  
8 ¶ 0034). By this definition, four razor blades in a razor cartridge are  
9 positioned in a non-progressive orientation if the overall exposures of the  
10 two interior razor blades are substantially the same. (*Id.*) Any arrangement  
11 of four razor blades in a razor cartridge such that the cutting edges of the  
12 blades lie along a common plane must have non-progressive blade geometry.  
13 If the cutting edges of all four blades lie in a common plane, then any  
14 tangent line connecting the cutting edges of any two blades must lie in the  
15 same plane. This implies that the cutting edge of the second razor blade  
16 must intersect any tangent line connecting the cutting edges of the first and  
17 third razor blades. The cutting edge of the third razor blade must intersect  
18 any tangent line connecting the cutting edges of the second and fourth razor  
19 blades. Therefore, if the cutting edges of all four blades lie in a common  
20 plane, the two internal razor blades must have the same neutral overall  
21 exposure and the blade geometry must be non-progressive.

## 22 ISSUES

23  
24 The Appellants argue claims 1, 4, 8, 10 and 28 for purposes of the  
25 rejection of the claims under § 103(a), addressing their substantive  
26 arguments solely to claim 1. (*See, e.g.*, App. Br. 6). Claim 1 is

1 representative of the group. *See* 37 C.F.R. § 41.37(c)(1)(vii) (2008). The  
2 Appellants contend that a four-bladed razor cartridge having a first or  
3 forward-most blade with a negative overall exposure and interior razor  
4 blades each having substantially the same overall exposure as the other  
5 interior blades would not have been obvious from the teachings of Coffin  
6 '982. (App. Br. 5). The Examiner concludes that these limitations would  
7 have been mere matters of design choice. That is, the Examiner concludes  
8 that these limitations would have been met by routine optimization of the  
9 razor cartridge disclosed by Coffin '982 to accommodate a user's  
10 requirements. (Ans. 4).

11 The Appellants contest the rejections of claims 23, 24 and 29-31  
12 under § 103(a) on the basis that the teachings of Coffin '982 in combination  
13 with the teachings of the secondary reference cited against each claim would  
14 not have provided one of ordinary skill in the art reason to provide a four-  
15 bladed razor cartridge having a first or forward-most blade with a negative  
16 overall exposure and interior razor blades each having substantially the same  
17 overall exposure as the other interior blades.<sup>2</sup> (App Br. 8, 10 and 11). In  
18 addition, the Appellants contend that Gilder teaches away from such a razor

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<sup>2</sup> More specifically, the Appellants state that, “[b]ecause claims 23 and 24 depend from claim 1 [these claims are] also believed to be allowable for at least the same reasons, as well as by virtue of the additional claim recitations included therein.” (App. Br. 8). The Appellants use similar language to express their contentions regarding the rejections of claims 29-31. (See App. Br. 10 and 11). “A statement which merely points out what a claim recites will not be considered an argument for separate patentability of the claims.” 37 C.F.R. § 41.37(c)(1)(vii). By the same token, an argument which merely alludes to what a claim recites without even pointing out the language on which the Appellants rely on will not be considered a separate argument for patentability.

1 cartridge by disclosing a razor cartridge having blades with progressively  
2 increasing exposures. (App. Br. 7-8; Reply Br. 4).

3 This appeal turns on two issues:

4 Have the Appellants shown that the Examiner failed to  
5 articulate reasoning with some rational underpinning sufficient  
6 to support the conclusion that the teachings of Coffin '982  
7 would have provided one of ordinary skill in the art reason to  
8 provide a four-bladed razor cartridge having a first or forward-  
9 most blade with a negative overall exposure and interior razor  
10 blades each having substantially the same overall exposure as  
11 the other interior blades?

12 Have the Appellants shown that the Examiner erred by  
13 concluding that Gilder does not teach away from the subject  
14 matter of claim 1?

#### 15 16 FINDINGS OF FACT

17 The record supports the following findings of fact ("FF") by a  
18 preponderance of the evidence.

19 1. Coffin '982 discloses a razor cartridge including a guard  
20 portion, a cap portion and at least four razor blades positioned between the  
21 guard portion and the cap portion. (Coffin '982, col. 4, ¶ 0020).

22 2. Coffin '982 uses the term "exposure" in a sense different from  
23 the specialized sense in which the Appellants use the term in the  
24 Specification and the claims on appeal. Coffin '982 uses the term  
25 "exposure" to mean "[t]he position of a razor blade's cutting edge relative to

1 the contact plane” that tangentially intersects the contact surfaces of the  
2 guard portion and the cap portion. (Coffin ’982, col 2, ¶ 0006).

3 3. Coffin ’982 discloses positioning the four razor blades in the  
4 embodiment of Fig. 5 so that the cutting edges of all four blades intersect the  
5 contact plane. (Coffin ’982, col. 5, ¶ 0023).

6 4. Coffin ’982 discloses positioning the four razor blades in the  
7 embodiment of Figure 6A so as to have an equal amount of change of  
8 “exposure” from razor blade to razor blade beginning with the first or  
9 forward-most razor blade to the last or aft-most blade. (Coffin ’982, col. 5,  
10 ¶ 0023). In other words, Coffin ’982 discloses positioning the four razor  
11 blades so that the distance between the horizontally-extending cutting edges  
12 of the blades and the contact plane varies linearly along the vertical  
13 direction. This description implies that the cutting edges of the four razor  
14 blades lie on a common plane.

15 5. Coffin ’982 discloses positioning the first or forward-most  
16 razor blade in the embodiment of Figure 6A to have a “negative exposure.”  
17 (Coffin ’982, col. 5, ¶ 0023). This description implies positioning the first  
18 razor blade below the contact plane so that the blade does not intersect the  
19 contact plane. (*See* Coffin ’982, col. 2, ¶ 0006).

20 6. Coffin ’982 teaches “[t]he blades can be positioned in a variety  
21 of different exposure configurations to provide different ‘feels’ or to tune the  
22 razor for different applications.” Coffin ’982 further teaches that placing  
23 blades at neutral or slight negative “exposures” diminishes the likelihood of  
24 skin irritation in a single pass but may necessitate multiple passes in order to  
25 shave the skin with desired closeness. (Coffin ’982, col. 2, ¶ 0006).



7. Gilder discloses a razor cartridge including a guard portion and a cap portion. (Gilder, col. 3, ll. 3-4).

8. Gilder discloses a razor cartridge including three razor blades having cutting edges intersecting a common “exposure” plane. (Gilder, col. 2, ll. 32-36 and col. 3, ll. 20-24).

## PRINCIPLES OF LAW

“[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.” *In re Aller*, 220 F.2d 454, 456 (CCPA 1955).

“A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.” *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994). A reference does not teach away from a combination merely by disclosing or suggesting a different combination, where the reference does not criticize, discredit or otherwise discourage the claimed combination. *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004).

## ANALYSIS

Coffin '982 discloses a razor cartridge containing four blades positioned so as to align the cutting edges of the four blades along a common plane. (FF 3 and 4). Coffin '982 also discloses varying the positions of the razor blades in a four-bladed cartridge and provides criteria for determining which arrangements are desirable. (See FF 6). For instance, Coffin '982 discloses that reducing the exposure of the razor blades relative

1 to the contact plane diminishes skin irritation in a single pass (*Id.*) These  
2 disclosures would have suggested to one of ordinary skill in the art that  
3 positioning the blades in a four-bladed razor cartridge so as to align the  
4 cutting edges of the four razor blades along a plane tilted to reduce the  
5 overall exposure of the first razor blade would be reasonably likely to  
6 diminish skin irritation in a single pass. Reasonable experimentation in  
7 accordance with this suggestion would have resulted in a four-bladed razor  
8 cartridge having a first or forward-most blade with a negative overall  
9 exposure and interior razor blades each having substantially the same overall  
10 exposure as the other interior blades.

11 The Appellants do not suggest any reason sufficient to show why a  
12 course of experimentation which involved varying the relative positions of  
13 the four razor blades in a four-bladed cartridge would have been  
14 unreasonable. Neither do the Appellants suggest any reason sufficient to  
15 show why one of ordinary skill in the art could not have predicted that such  
16 a course of experimentation would not succeed in optimizing skin irritation  
17 and closeness of shave. In other words, the Appellants fail to show why the  
18 Examiner erred in concluding that the positioning of the blades would have  
19 been a matter of design choice in view of the teachings of Coffin '982.

20 Gilder does not teach away from the combination recited in claim 1.  
21 Both Coffin '982 and Gilder disclose positioning blades in a razor cartridge  
22 so that the cutting edges of the blades intersect a common plane. (FF 3, 4  
23 and 8). Even assuming that the Appellants are correct in contending that  
24 Gilder teaches a progressive blade geometry, the Examiner is correct in  
25 concluding (*see* Ans. 8) that Gilder merely discloses a different blade  
26 exposure arrangement. The Appellants identify nothing in Gilder sufficient

1 to show that Gilder would have discredited non-progressive blade  
2 geometries or discouraged one of ordinary skill in the art from a course of  
3 experimentation which would have yielded the subject matter of claim 1.

4  
5 CONCLUSIONS

6 The Appellants have not shown that the Examiner failed to articulate  
7 reasoning with some rational underpinning sufficient to support the  
8 conclusion that the teachings of Coffin '982 would have provided one of  
9 ordinary skill in the art reason to provide a four-bladed razor cartridge  
10 having a first or forward-most blade with a negative overall exposure and  
11 interior razor blades each having substantially the same overall exposure as  
12 the other interior blades. Therefore, the Appellants have not shown that the  
13 Examiner erred in rejecting claims 1, 4, 8, 10 and 28 under § 103(a) as being  
14 unpatentable over Coffin '982.

15 The Appellants have not shown that the Examiner erred by concluding  
16 that Gilder does not teach away from the subject matter of claim 1.  
17 Therefore, the Appellants have shown that the Examiner erred in rejecting  
18 claims 23 and 24 under § 103(a) as being unpatentable over Coffin '982 and  
19 Gilder.

20 No additional issues are raised concerning the remaining rejections.  
21 Therefore, the Appellants have not shown that the Examiner erred in  
22 rejecting claims 29 and 30 under § 103(a) as being unpatentable over Coffin  
23 '982 and Trotta. Neither have the Appellants shown that the Examiner erred  
24 in rejecting claim 31 under § 103(a) as being unpatentable over Coffin '982  
25 and Coffin '665.

DECISION

We AFFIRM the rejections of claims 1, 4, 8, 10, 23, 24 and 28-31.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED

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